Name: _____ Date: _____

Suppose that you select a person at random from your school. Are these pairs of events mutually exclusive?

no 1. has ridden a roller coaster; has ridden a Ferris wheel

no 2. has brown hair; has brown eyes

yes 3. is left-handed; is right-handed

no 4. owns a classical music CD; owns a jazz music CD

yes 5. is a senior; is a junior

no 6. has shoulder-length hair; is male

40% 7. A group of senior citizens have won free vacation packages. The vacation to Bermuda is chosen by 25% of them, 60% choose Alaska, and 15% choose Costa Rica. What is the probability that one randomly chosen senior citizen chooses to vacation in Bermuda or Costa Rica? P(Bermuda) + P(Costa Rica)

25% + 15%

Use the general addition rule to compute the probability that if you roll two six-sided dice,

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

19/36 8. you get odd sum or a sum greater than 10.

P(odd) + P(#>10) − P(both)

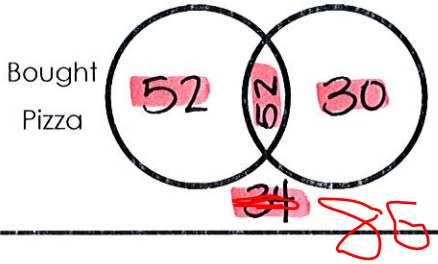
18/36 + 3/36 − 2/36

5/9 9. you get even sum or a sum of 11.

P(even) + P(11) − P(both)

18/36 + 2/36 − 0/36

67/110 10. Of the 220 people who came into the Italian deli on Friday, 104 bought pizza and 82 used a credit card. Half of the people who bought pizza used a credit card. What is the probability that a customer bought pizza or used a credit card?



134/220

A group of 60 students were asked if they played field hockey (F), basketball (B) or soccer (S). The diagram below displays the results. Use the information given to find the following probabilities.

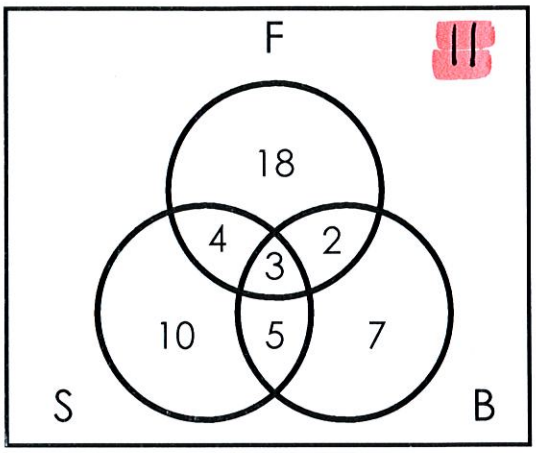
2/15 11. $P(B \cap S)$ 8/60

13/20 12. $P(F \cup B)$ 39/60

11/20 13. $P(F)'$ 33/60

49/60 14. $P(F \cup B \cup S)$

11/60 15. $P(F \cup B \cup S)'$



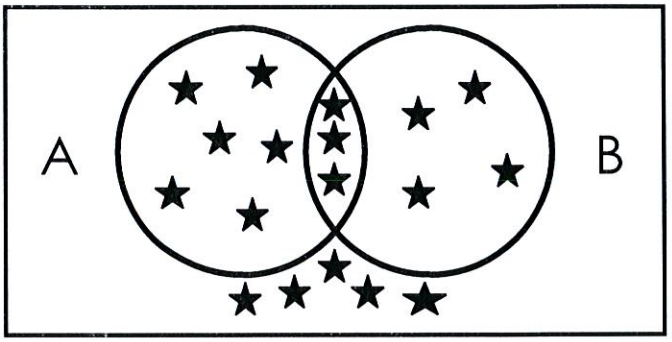
Given the Venn Diagram below with set A and set B determine the following:

1/6 16. $P(A \cap B)$ 3/18

13/18 17. $P(A \cup B)$

2/3 18. $P(\bar{A} \cup B)$ 12/18

1/3 19. $P(A \cap \bar{B})$ 6/18



95% 20. Suppose 80% of people can swim. Suppose 70% of people can whistle. Suppose 55% of people can do both. What percentage of people can swim or whistle?

$P(S \text{ or } W) = P(S) + P(W) - P(\text{both})$

$80\% + 70\% - 55\%$

10% 21. At Hillgrove, 60% of the students carry a backpack or a wallet. 40% carry ~~only~~ a backpack, and 30% carry ~~only~~ a wallet. If a student is selected at random, find the probability that the student carries both a backpack and a wallet.

$P(b \text{ or } w) = P(b) + P(w) - P(\text{both})$

$60\% = 40\% + 30\% - P(\text{both})$

$-10\% = -P(\text{both})$